

ROMANIA – PORTUGAL: A COMPARATIVE ANALYSIS OF THE TWO COUNTRIES' LABOUR MARKETS

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Our choice was justified by the fact that between the two countries exist some features that make them interesting to study from the employment point of view. Thus, both countries are Latin and this is why we consider they are comparable, because employment means people, more precisely mentalities and attitudes to work.

We considered that it is interesting to see how the labour market from the east Latin Europe has evolved, in a comparable, crucial period, with its counterpart from west Latin Europe. First of all, we would like to point out the fact that our intention is to analyse the periods which from the economic history point of view have influenced in a decisive manner the present evolution of the two countries.

The Portugal labour market is a subject of real scientific interest (we would like to mention that even Michael Porter was interested by this topic). Our paper tries to emphasize the common and different features of the two labour markets, in order to facilitate an experience sharing process on this topic.

To achieve the paper's objectives statistical and cluster analysis have been used. This is one of the best ways to capture the influence of determinant factors on labour market performance.

The degree of originality is given by the assumed objectives, namely studying some very up-to-date problems from an interconnected perspective (historical similarities, structural changes, labour market performance) and analyzing the Romanian situation compared to other EU countries, i.e. Portugal.

The main impact of the paper will be on the practical level through the model outcomes and conclusions. One of the objectives is to look for solutions to the problems identified and to persuade policy makers to give them a greater importance.

Our main contribution is represented by the fact that we have approached this topic from an economic and historical perspective, trying to find explanations for the present situation in the modern past of the two nations.

Key words: labour market, structural changes, education, cluster analysis, EU accession

JEL codes: J21, J24, J88

I. Introduction

Since the second half of 2008, European economies have been affected by a financial crisis of unprecedented severity which had an impact on public finances, people incomes, and not least on the labour markets. In all member states, gross domestic product decreased, and some of them have registered the largest loss of output from the last recession in the early 1970s (Arpaia and Curci 2010).

Across the European Union, employment rate decreased as a result of the economic crisis, ending in the first quarter of 2010 to 63.7%, a level close to that recorded in 2005, while the

unemployment rate was 10.2% the highest since the launch of the Lisbon Strategy (Leschke and Watt 2010).

Portugal is one of the developed countries of the European Union that has strongly experienced the global crisis consequences. With a budget deficit of 8.6% in 2010, by 5.6 percentage points higher than the Euro zone's limit of 3% and the highest unemployment rate in the last 30 years, approximately 11%, the economic recovery of Portugal is announced difficult and complicated. Regarding Romania, this was among the few EU countries which recorded a decrease in gross domestic product per capita of 1.3% in 2010 (Portugal experienced an increase by 1.3%). Although, in the same year, unemployment rate in Romania was below the European average of 9.6%, employment rate was much lower than other Member States, only 58.6%, compared with 66.3% in Portugal.

Despite the differences mentioned between the two Member States in terms of labour market performances, Portugal has many features in common with other countries recently accepted in the European Union such as Romania.

This is proved by many studies, one of them being the paper *Labour market transition in Portugal, Spain and Poland* (Teixeira 2001) in which the author has analysed the Portugal labour market before and after the moment of EU accession. The article encloses a small historical evolution of the labour market starting with the 1970s, after Salazar's dictatorial regime when trade unions were playing an insignificant role in this market and there were no right to strike. Between 1969 and 1974, in the post dictatorship period the labour market started to organise and claim basic rights.

What worth to be noticed is that in 1989 the labour market in Portugal was influenced by major changes in legislation, most of them regarding the labour contracts, especially the fix-term one. Coincidentally or not, after a comparable period from the moment when our country was accepted in the EU (2007), in 2011 Romanian labour market is dramatically transforming due to the new Labour Code, one of the main aria of change being also represented by the fix-term contracts considered by policy makers to be an useful mechanism to increase the employment rate.

After EU entry, Portuguese economy kept the attention of some famous economists like Michael Porter, who in his paper *Portuguese Competitiveness* (2002), emphasised the key role played by the innovative capacity as an input for the productivity (considered similar to competitiveness). In fact, he indicates the human resource as the main factor that can determine the prosperity of an economy. This idea is also reiterated when he approached in a more detailed manner the main factors which influence the productivity and the microeconomic business environment. It is interesting to notice that, in 1994 and even in 2002, over 15 years after the moment of adhesion to EU (1986) Portugal was recording a lack of skilled workforce (including the management).

This might be a cause of the fact that even if from 1995 until 2001 the Portuguese economy has recorded a solid economic growth it wasn't based on productivity. Reading these last statements, most Romanian economists could recognize a kind of pattern that could also be applied to our country. After EU accession (2007), Romanian economy continued to record economic growth based on consume, while the qualified workforce has massively emigrate to the western economies.

II. Positioning Romania and Portugal's labour markets in the European Union

To show the place of the two labour markets, the Romanian and Portuguese one, at the European level, a cluster analysis was performed. The following 9 indicators were included in the model:

- *employment in agriculture, industry and services* (% of total employment) – to capture labour market structure;
- *GDP per person employed* (constant 1990 PPP \$) – to assess labour productivity,

- *labour force with tertiary education* (% of total) – to evaluate the level of education of the labour force;
- *labour participation rate* (% of total population ages 15+), *long-term unemployment rate* (% of total unemployment), *youth unemployment rate* (% of total labour force ages 15-24), *unemployment rate* (% of total labour force) – to capture labour force participation in economic activity and the existence of some vulnerable categories.

The analysis was carried out for the year 2007 because we wanted that the results not to be affected by the financial crisis consequences and to accurately show the structural situation of the labour market in Romania and Portugal.

Cluster analysis or classification analysis is a method of data analysis that allows identification and classification of similar entities (objects or cases), depending on the characteristics they possess, highlighting the similarities of objects within a group (cluster) and differences from objects in other clusters.

Like factor analysis, cluster models study correlations of a whole set of variables without grouping them into categories such as: dependent variable and independent variables, like regression analysis does. If factor analysis aims to reduce the number of variables, cluster analysis is designed to classify objects into homogenous groups based on the characteristics analyzed so that objects in a group should be similar in terms of these variables, but different from other objects groups.

Non-hierarchical algorithms have been preferred for grouping objects into clusters whose characteristics were measured, a method commonly used in economic analysis being k-means.

K-means algorithms are based on the following considerations: if the number of groups is known a priori, objects will be associated with a group at a first step according to certain criteria. It then calculates averages for each group, and each object is associated with a group based on similarity with group averages. Group averages are again computed, and association process continues until objects no longer change their group.

Cluster analysis requires that variables be measured in comparable units and for eliminating the influence of measuring unit, variables were standardized so as to have average 0 and standard deviation 1.

$$x_{ij}^s = \frac{(x_{ij} - \bar{x}_{ij})}{\sigma}, \text{ where } \bar{x}_{ij} \text{ is the average and } \sigma \text{ standard deviation.} \quad (1)$$

Table no. 1 Cluster Membership

Case Number	Cluster	Distance	Italy	2	2.616
Austria	1	1.802	Latvia	1	1.938
Belgium	1	2.493	Lithuania	1	2.824
Bulgaria	2	1.440	Luxembourg	1	2.383
Cyprus	1	2.127	Malta	1	2.683
Czech Republic	2	2.375	Netherlands	1	3.759
Denmark	1	2.296	Poland	2	2.092
Estonia	1	2.297	Portugal	2	1.800
Finland	1	1.415	Romania	2	4.378
France	1	2.064	Slovak Republic	2	2.922
Germany	1	2.414	Slovenia	2	2.331
Greece	2	2.836	Spain	1	2.024

Case Number	Cluster	Distance	Italy	2	2.616
Hungary	2	1.541	Sweden	1	2.354
Ireland	1	1.815	United Kingdom	1	1.456

Source: Authors processing based on World Development Indicators & Global Development Finance

Running cluster analysis allowed grouping the 27 countries in two categories (Table no. 1):

Cluster 1 (17 countries): Austria, Belgium, Cyprus, Denmark, Estonia, Finland, France, Germany, Ireland, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Spain, United Kingdom. These countries have common characteristics such as: high labour productivity, a high rate of participation in economic activity, skilled workforce and an economic structure predominantly based on employment in service sector (Table no. 2).

Cluster 2 (10 countries): Bulgaria, Czech Republic, Greece, Hungary, Italy, Poland, Portugal, Romania, Slovak Republic, Slovenia. This group of countries have a labour market affected by the problem of unemployment, particularly long-term unemployment and unemployment among young people, while the workforce is employed mainly in primary and secondary sectors (Table no. 2).

Table no. 2 Final Cluster Centres

Variables	Cluster 1	Cluster 2
Employment in agriculture (% of total employment)	-0.382	0.649
Employment in industry (% of total employment)	-0.458	0.779
Employment in services (% of total employment)	0.530	-0.902
GDP per person employed (constant 1990 PPP \$)	0.487	-0.829
Labour force with tertiary education (% of total)	0.385	-0.641
Labour participation rate, total (% of total population ages 15+)	0.328	-0.557
Long-term unemployment (% of total unemployment)	-0.600	0.781
Unemployment, youth total (% of total labour force ages 15-24)	-0.360	0.613
Unemployment, total (% of total labour force)	-0.323	0.550

Source: Authors processing based on World Development Indicators & Global Development Finance

III. Romania-Portugal, a comparative analysis

The cluster analysis results show that the characteristics of the Portuguese labour market are closer to those of emerging countries such as Romania, which means that the paths of their economies over time may be similar.

Thus, in 1986 when Portugal was accepted in the European Union, its gross domestic product per capita was little more than 50% of the other Member States average. The EU entry advantages were capitalized and Portugal registered a substantial increase in gross domestic product per capita, with a growth rate of 6.5% over the first years after accession. This economic advance was supported by strong investment growth, with a rate of about 18% in 1987 (Table no. 3).

Table no. 3 Key Indicators of Portugal's economy before and after the EU entry

Portugal	GDP per capita (constant 2000 US\$)	GDP per person employed (constant 1990 PPP \$)	Population growth (annual %)	GDP per capita growth (annual %)	Gross fixed capital formation (annual % growth)
1980	6504	19916	1.081	3.465	8.536
1981	6552	20299	0.867	0.741	5.503
1982	6651	20738	0.612	1.512	2.257
1983	6611	19775	0.433	-0.604	-7.132
1984	6464	19656	0.346	-2.219	-17.386
1985	6631	20291	0.224	2.577	-3.547
1986	6906	21091	-0.007	4.148	10.871
1987	7359	21856	-0.167	6.559	17.997
1988	7930	22926	-0.260	7.769	14.833
1989	8467	23604	-0.311	6.773	3.657
1990	8838	23187	-0.413	4.381	7.607

Source: World Bank, World Development Indicators & Global Development Finance

Romanian economy has recorded a similar trend as Portugal a few years before joining the European Union and in the first two years after this event. Thus, in 2007 our country's gross domestic product accounted for 42% of the EU average, an average reduced by the previous enlargements. Catching rate was high. In 2006 GDP per capita recorded a growth rate of over 8% and in the first year after the EU entry of more than 9.5%. In 2007, investment growth rate reached a record level of 30%. But Romania still has very low labour productivity, less than half the labour productivity of Portugal in the 80s. This structural problem is accompanied by demographic issues, i.e. the population maintained a negative trend in the last decade (Table no. 4).

Table no. 4 Key Indicators of Romanian economy before and after the EU entry

Romania	GDP per capita (constant 2000 US\$)	GDP per person employed (constant 1990 PPP \$)	Population growth (annual %)	GDP per capita growth (annual %)	Gross fixed capital formation (annual % growth)
1999	1616	6202	-0.200	-1.002	-4.835
2000	1651	6182	-0.067	2.168	5.494
2001	1770	6584	-1.395	7.185	9.147
2002	1888	7830	-1.497	6.685	8.306
2003	1992	8245	-0.281	5.496	9.200
2004	2165	9096	-0.263	8.686	10.000
2005	2260	9620	-0.233	4.416	2.601

2006	2444	10306	-0.216	8.133	9.623
2007	2596	10902	-0.189	6.201	30.300
2008	2845	11644	-0.154	9.595	19.300
2009	2607	-	-0.145	-8.367	-11.178

Source: World Bank, World Development Indicators & Global Development Finance

The similarities between the two countries are very evident when their labour markets are analyzed in a comparative manner during the periods close to the accession moment. Thus, participation in economic activity was around 60%, and the main problems of both countries recorded high rates of long-term unemployment and youth unemployment (Fig. no. 1).

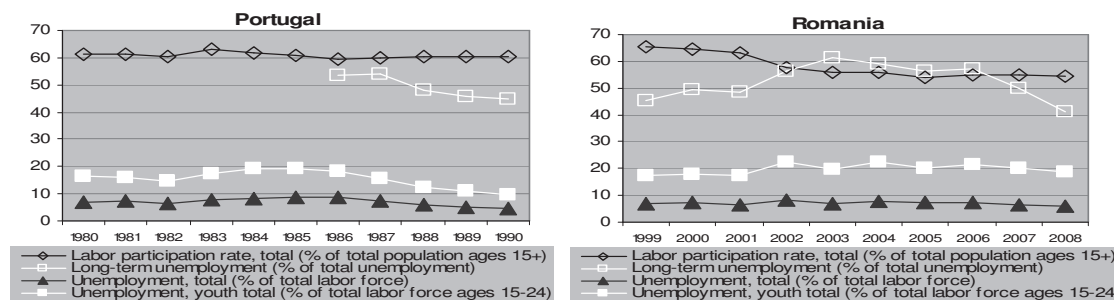


Fig. no. 1 Portugal and Romania's labour market situation

Source: Authors processing based on World Development Indicators & Global Development Finance

The two labour markets are quite similar in terms of labour market structure, Portugal being characterised for a long period by a high rate of population occupied in agriculture and industry, only a small part working in the services area (Fig. no. 2).

Even today, Romania has a different labour market structure compared to the European model, recording a large number of people employed in agricultural activities.

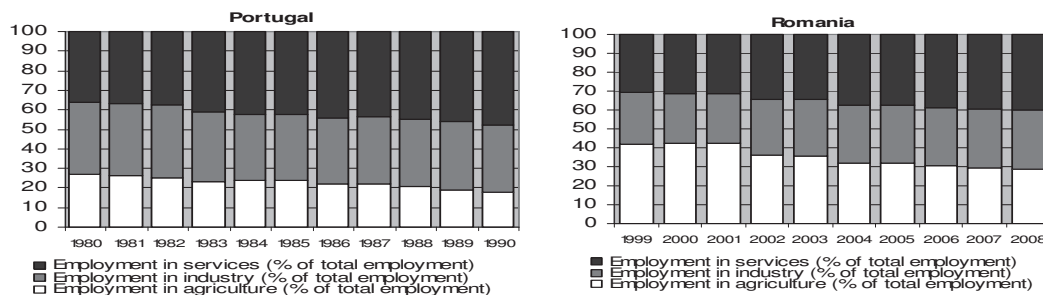


Fig. no. 2 Portugal and Romania's employment structure

Source: Authors processing based on World Development Indicators & Global Development Finance

VI. Conclusions

From this paper we can see that the Portugal's experience can be very useful to our country, due to the similitude and why not, to some contrasts. We tried to choose comparable periods from the historical point of view, when the two economies achieved critical milestones in their evolutions.

The economic background of the two countries has been dramatically influenced by their authoritarian political regimes (Salazar and Ceausescu), followed by transition processes to the market economy, and with a lag of 21 years, they joined to EU.

The both economies faced and are still recording problems generated by the low productivity and lack of skilled workforce.

Thus, the evolutions of the Latin extremes of the EU are quite similar, and we can consider that is mostly due to the features of their people. We have seen how they behave in the modern economical history and it will be interesting to watch how the labour markets from these countries will evolve after the current economic crisis, but this generous issue will be the subject of a future paper.

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